University *of* New Haven

COLLEGE OF ARTS AND SCIENCES

Department of Mathematics and Physics

Course: MATH 1110 **Section**: _____ **Title**: College Algebra **Semester**: Spring 2019

Classroom: _____ **Meeting Times**: _____

Instructor: _____ **Office**: _____

Email: _____ **Phone**: _____

Web: _____

Office Hours: _____

MATH 1110 College Algebra Syllabus

Catalog Description

placement into MATH 1110, or completion of MATH 1108 with a grade of C or higher. Topics include: a review of the fundamental algebraic operations; an extensive study of functions including transformations and function composition; linear and quadratic equations and inequalities; quadratic functions and models; synthetic division; zeros of polynomials and rational functions; inverse functions and a study of the exponential and logarithmic functions; systems and matrices, and solving systems of linear equations. This course is intended primarily for students whose program of study requires calculus. 3 credits

Note: This class is taught through the `Math Zone` in North Hall. For additional information about the Math Zone, including options for acceleration or challenge exams, please contact `Yevgeniya Rivers`, Math Zone Director or `Matthew Griffiths`, Chair Department of Mathematics and Physics. Additional curriculum information and placement information can be found at `Math Physics News`.

Required Materials

The Hawkes Learning software is a required component of this course. You will use Hawkes to complete and submit your homework, which accounts for 25% of your grade. Textbook bundles that include the software are available through the University bookstore, *Pre-Calculus*, by Paul Sisson. Hawkes Learning Systems, 2e, ISBN `9781941552902` (2015). An Access Code registered in your name is required to use the software. Do not purchase your materials from an online vendor or another student. These Access Codes may be already registered to another student, making them unusable. A notebook is required to keep notes during lab and lecture.

HOW TO USE HAWKES

Each lesson of the software offers three modes:
1. Learn is an interactive presentation of the material found in your textbook and includes instructional video clips and example problems.
2. Practice gives you access to unlimited practice problems, provides error- specific feedback for commonly made mistakes, hints for all incorrect answers, and includes an interactive Tutor with Step-by-Step guidance and fully worked out solutions. Note that every question type from Certify can be found in the Practice mode.
3. Certify is the homework portion of the lesson. After answering the set of questions without exceeding the available strikes (or lives), you will receive a perfect 100% score for your homework. If you are not able to Certify in your attempt, you are able to start a new set of questions over again with no penalty. In the meantime, you may wish to spend more time in the Practice mode before attempting Certify again. You have unlimited attempts in each lesson to receive full credit before the due date.

Getting Help

Additional videos can be found at `http://www.hawkestv.com`. Contact Hawkes with any technical questions, including creating your username and password, finding your Access Code or license number, or completing your work. Phone support is available Monday-Friday, from 8:00am-10:00pm ET. Chat support is available 24/7. Phone: 1.800.426.9538 Email: support@hawkeslearning.com Chat: `http://www.hawkeslearning.com/chat`

Assessment Requirements for MATH 1110-01

Each student is assessed based on a computed point score from 0 to 100. The score is based on exams and mastery points as follows:

1. Examinations: 55% for four exams (100 pts each) and 20% for the Final Exam (all exams are 100 pts each) You must take the exam with your class as scheduled (or earlier). We recommend at least one <u>self-assessment</u> with a score of 50% or higher before taking a chapter exam. You must take the password-protected self-assessment in the Math Zone.

2. Certify: 25% for Certification of lessons achieved through the certify section. You are not required to complete all learn and practice problems but it is recommended that you spend more time in practice than in certify (unless you already know the material). While studying and completing practice problems, utilize the instructors and tutors for assistance. When you Certify you should do so without assistance treating it as treat a mini practice test. A late penalty will be assigned as follows:

1.	10.00 % penalty for up to	2	day(s) late
2.	20.00 % penalty for up to	4	day(s) late
3.	30.00 % penalty for up to	7	day(s) late
4.	50.00 % penalty for more than	7	day(s) late

3. Attendance: Active engagement in classwork and class discussion is an important part of this class. Attendance is recorded on Starfish after each class meeting. <u>After 2 absences your Hawkes Learning account will be inactivated.</u> You will have to come speak with either your instructor or the Math Zone director to have it reactivated. After 3 absences (excused or unexcused) your instructor has the right to drop you from the course.

4. *Bonus Points*: Up to 8 extra points will be awarded. See discussion of exam attempts for more details.

Note: Students who have been found to have violated the rules governing academic integrity will, at the very least receive a 0 grade on the paper or exam which was the source of the violation, and may be subject to further penalties as allowed by the University. All students who are suspected of having violated academic integrity requirements will be reported to the Dean of Students.

Discussion of Exam Attempts

During the semester there are 4 chapter exams and a final; only 2 attempts per chapter are permitted. The score of the highest attempt will be used in calculating your grade. The first attempt must be taken with your class. All attempts must be completed by **Friday April 27th no later than 4pm**. The final exam schedule may be found at online by logging into `MyCharger`. Please fill in below based on the schedule. The Final Exam is on

Date: _____ (mm/dd/yy) at Time: _____ (am/pm).

   ☞ **Note: Only 1 attempt is allowed for the final exam**.

All quizzes and exams are closed book and notes with only an approved scientific calculator allowed. All chapter exams have a prerequisite set of mastery points. The prerequisite may be waived for the first attempt, but not subsequent attempts. The first attempt for chapter exams must be taken on or before the scheduled dates or the first attempt will be recorded as a zero (0). Mastery points will not be deducted as a result of any test.

Exam Retake Guidelines

1. You must debrief the 1st attempt with a tutor or instructor before the 2nd attempt;
2. You must take the self-assessment before taking your 2nd attempt;
3. You must earn all the Mastery Points for the 2nd attempt; and,
4. You cannot retake a test the same day as your 1st attempt.

Bonus Points

Bonus points are awarded only in the case of each chapter test first attempt as follows:

1. For a point score of 75 – 87.5 you will earn one bonus point toward your Total Points Score (TPS); and,
2. For a point score of 87.5 – 100 you will earn two points.

Therefore you may earn up to 8 bonus points toward your final TPS.

Scoring and Course Grades

The letter grade is based on the student's total point score (TPS) for the semester. The class letter grade is assigned based on

TPS			Grade	TPS			Grade
97.5	–	> 100.0	A +	77.5	–	80.0	C +
92.5	–	97.5	A	72.5	–	77.5	C
90.0	–	92.5	A −	70.0	–	72.5	C −
87.5	–	90.0	B +	67.5	–	70.0	D +
82.5	–	87.5	B	60.0	–	67.5	D
80.0	–	82.5	B −	0	–	60	F

An INC or a W grade is assigned based on Department, College and University expectations and policies as outline starting on page 5. Please read through these guidelines carefully.

Course Goals and Learning Outcomes

The course provides a seamless transition into Pre-calculus, and possibly into Calculus. Deficiencies in algebra are the single most common reason students experience difficulties with more advanced mathematics courses. The purpose of College Algebra is to provide students a solid foundation in the solution of a large variety of problems requiring algebra. Proficiency in algebra is a pre-requisite to success in further mathematics courses. This course is designed to teach students to:

 Learning Outcomes:
1. Simplify algebraic expressions
2. Solve for the unknown variable in equations using various manipulations CC3.1.1
3. Construct the equation of a circle
4. Identify the properties of functions
5. Compute different operations on functions CC3.1.1
6. Compute the inverse of a function
7. Sketch the graph of functions CC3.1.2
8. Solve systems of linear equations
9. Create algebraic equations from a word problem CC3.1.1
10. Apply the concepts of ratio, proportion, and variation to solve word problems
11. Verify reasonableness of solutions to word problems CC3.1.3

Students will also achieve the following Core Learning Objectives:
12. the student will be able to apply mathematical concepts and principles to solve problems;
13. differentiate among multiple representations of mathematical information; and
14. assess mathematical reasonableness and consistency.

Required curriculum content

All sections of MATH 1110 College Algebra will cover, as a minimum, the material from *Pre-Calculus*, by Paul Sisson. Hawkes Learning Systems, 2e, ISBN **9781941552902** (2015).

Sec	Textbook Topic	Lesson	Certification Due	Percentage of Grade
	Chapter R – Review			
R.3	Polynomials	1/23	4	0.80%
R.4	Factoring Polynomials	1/23	8	0.80%
	Exam - Chapter R – review - Tuesday May 23		5/23- Exam	
	Chapter 2 – Equations, Inequalities, and Problem Solving			
2.1	Rectangular Coordinates and Graphs	1/30	14	0.80%
2.2	Circles	1/30	17	0.80%
2.3	Functions	2/6	22	0.80%
2.4	An Introduction to Problem Solving	2/6	28	0.80%
2.5	Equations of Lines and Linear Models	2/13	32	0.80%
2.6	Graphs of Basic Functions (Functions Library)	2/20	38	0.80%
2.7	Graphing Techniques (Transformations)	2/27	46	0.80%
2.8	Function Operations and Compositions	3/6	49	0.80%
	Exam - Chapters R & 2 Tuesday May 23		5/23- Exam	
	Chapter 3 – Polynomial and Rational Functions			
3.1	Quadratic Functions and Models	3/13	52	0.80%
3.2	Synthetic Division	3/20	55	0.80%
3.3	Zeros of Polynomial Functions	3/20	59	0.80%
3.4	Polynomial Functions: Graphs, Applications, Models	3/27	63	80%
3.5	Rational Functions: Graphs, Applications, Models	3/27	67	
3.6	Variation	4/3	7	0.80%
	Exam - Chapter 3 - Tuesday May 23		5/23- Exam	
	Chapter 4 – Inverse, Exponential and Logarithmic Functions			
4.1	Inverse Functions	4/10	78	0.80%
4.2	Exponential Functions	4/17	83	0.80%
4.3	Logarithmic Functions	4/24	87	0.80%
	Exam - Chapter 4 - Tuesday May 23		5/23- Exam	
	Chapter 5 – Systems and Matrices			
5.1	Systems of Linear Equatons	5/1	91	0.80%
	Final Exam - Thursday June 22		6/22- Exam	Total Certify 25%

Academic Calendar for Spring 2019

Spring 2019 classes start on Monday, August 27 and end on Wednesday, December 19. The last day to drop classes without any financial penalty is Tuesday, December 4, and the last day to withdraw from the class, i.e., to request a W grade is Tuesday, October 30. Semester holidays are on: Labor Day: Sept 3; Fall Break: Sunday-Tuesday, Oct 21 - 23; Thanksgiving: Wednesday-Sunday, Nov 21-25 .

The **Academic Calendar** provides a complete list of important dates, and the dates for the **Final Exam** schedules are also available online. Be sure you are logged into **MyCharger** to view this link.

Further Considerations and Rules

- *Electronic devices*: **The use of phones and electronic devices, except in an emergency or unless otherwise approved by the instructor, is disallowed in class (including all lab classes)**. The use of any electronic device, except those explicitly approved for use during any exam, will result in grade of 0 on that exam. If in doubt, please inquire prior to using any electronic device.
- *Scheduling conflicts*: It is the student's responsibility to contact the instructor concerning any scheduling conflicts which may result in late papers, or other scheduling conflicts, e.g., an absence for an exam.

Department, College and University Expectations and Policies

It is important that students familiarize themselves with a range of policies and guidelines that have been established by the Department of Mathematics and Physics, the College of Arts and Sciences, and the University of New Haven. These are an integral part of the syllabus for this course.

Adding/Dropping a Class

The final day to drop this course without it appearing on your transcript is discussed on the `Academic Schedules and Registration` web page. After the first week of class, self-service registration will not be enabled for students to directly add or drop classes. Students should contact the Registrar's office directly or the Academic Success Center for assistance with adding and dropping courses during this time.

Attendance Regulations

University attendance policy guidelines require that:

> Students are expected to attend regularly and promptly all their classes, appointments, and exercises. While the university recognizes that some absences may occasionally be necessary, these should be held to a minimum. A maximum of two weeks of absences will be permitted for illness and emergencies. The instructor has the right to dismiss from class any student who has been absent more than the maximum allowed. A dismissed student will receive a withdrawal (W) from the course if they are still eligible for a withdrawal per the university Withdrawal from a Course policy, or a failure (F), if not. A student who is not officially registered in the course is not permitted to attend classes or take part in any other course activities. Students absent from any class meeting are responsible for making up missed assignments and examinations at the discretion of the instructor.

Students are to adhere to the policy attendance policy guidelines outlined in the University Catalog under the heading, *Attendance Regulations*, found online in the `Undergradaduate Catalog` or alternatively found in the `Student Handbook` on `pp.48-49`.

Religious Observance Policy for Students

The University of New Haven respects the right of its students to observe religious holidays that may necessitate their absence from class or from other required university-sponsored activities. Students who wish to observe such holidays should not be penalized for their absence, although in academic courses they are responsible for making up missed work. The College provides that,

> Instructors should try to avoid scheduling exams or quizzes on religious holidays, but where such conflicts occur should provide reasonable accommodations for missed assignment deadlines or exams. If a class, an assignment due date, or exam interferes with the observance of such a religious holiday, it is the student's responsibility to notify their instructor, preferably at the beginning of the term, but otherwise at least two weeks before the holiday.

More information about religious observance policies can be found in the Student Handbook on `pp.48-49` under the heading, *Attendance Policies: Religious Observance Policy for Students*.

Withdrawal from a Course

Students wishing to withdraw must submit a request for an official course withdrawal in writing using the online `Course Withdrawal Form`, or alternatively complete and hand in the pdf based `Course Withdrawal Form`. The final date to request a withdrawal is listed in the `Academic Calendar`. This request must be submitted to the Registrar's Office and signed by the International Office if you are an international student. The grade of W will be recorded, but the course will not affect the GPA. [1]

Incomplete Grade Policy

A grade of Incomplete (INC) is given only in special circumstances and indicates that the student has been given permission by the instructor to complete required course work (with the same instructor) after the end

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[1] Please note that it is the responsibility of the student to assure that the required paperwork and documentation is completed by the deadline.

of the term. In the absence of the instructor a student should contact the Department Chair. Students need to examine carefully the **changed guidelines** pertaining to INC grades, specifically:

> To remove the INC grade, the student must complete all required course work in timely fashion as stipulated by the instructor but no later than the end of the following term. Fall and intersession course incomplete grades must be completed no later than the last day of the spring term. Spring and summer course incomplete grades must be completed no later than the last day of the fall term.

> If the course work is not submitted within the allotted time, the INC grade will be changed to an F shortly after the deadline by the Office of the University Registrar. Students will be notified via campus email at least two weeks prior to the change of grade process.

The University policy on incomplete grades is discussed in the `Academic Catalog` under the heading, *Incomplete (INC) Grade Policy*.

Academic Integrity Policy and Procedures

The University of New Haven expects its students to maintain the highest standards of academic conduct. Academic dishonesty is not tolerated at the University. To know what it is expected, students are responsible for reading and understanding the statement regarding academic honesty in the Student Handbook. Specifically, students are required to adhere to the Academic Integrity Policies specified in the `Student Handbook`, i.e., on `pp.66–73`.

Please ask your instructor about their expectations regarding permissible or encouraged forms of student collaboration if there is any confusion about this topic. The Department of Mathematics and Physics fully adheres to the Academic Integrity Policy:

> Academic integrity is a core university value that ensures respect for the academic reputation of the University, its students, faculty and staff, and the degrees it confers. The University expects that students will conduct themselves in an honest and ethical manner and respect the intellectual work of others. Please be familiar with the University's policy on Academic Integrity. Please ask about expectations regarding permissible or encouraged forms of student collaboration if they are unclear.

Coursework Expectations

This course will require significant in-class and out-of-class commitment from each student. The University estimates that a student should expect to spend two hours outside of class for each hour they are in a class. For example, a three credit course would average six [6] hours of additional work outside of class.[2] Coursework expectations are detailed in the `Academic Catalog` under the heading, *Course Work Expectations*.

Please note, that MATH 1110 is a 3-credit course, and as such requires a total of 9 hours per week invested in study and homework for the average student.

Commitment to Positive Learning Environment

The University adheres to the philosophy that all community members should enjoy an environment free of any form of harassment, sexual misconduct, discrimination, or intimate partner violence. If you have been the victim of sexual misconduct we encourage you to report this. If you report this to a faculty/staff member, they must notify our college's Title IX coordinator about the basic facts of the incident (you may choose to request confidentiality from the University). If you encounter sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin, ancestry, sex, sexual orientation, gender identity, or disability please contact the Title IX Coordinator, Caroline Koziatek at (203)-932-7479 or `CKoziatek@newhaven.edu`. Further online information about is available at `Title IX`.

Reporting Bias Incidents

At the University of New Haven, there is an expectation that all community members are committed to creating and supporting a climate which promotes civility, mutual respect, and open-mindedness. There also exists an understanding that with the freedom of expression comes the responsibility to support community

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[2]Please note that study guidelines are important, i.e., there is substantial evidence that shows that the pass rates for students in math courses decrease dramatically as the time spent on outside study falls below 2 hours of homework per credit per week.

members' right to live and work in an environment free from harassment and fear. It is expected that all members of the University community will engage in anti-bias behavior and refrain from actions that intimidate, humiliate, or demean persons or groups or that undermine their security or self-esteem.

If you have witnessed or are the target of a bias-motivated incident, please contact the Office of the Dean of Students at 203-932-7432 or Campus Police at 203-932-7014. Further information about this and other reporting options may be found at `Report It`.

University Support Services

The University recognizes students often can use some help outside of class and offers academic assistance through several offices. In addition to discussing any academic issues you may have with your instructor, advisor, or with the the courses or department coordinator or chair, the University provides these additional resources for students:

The Center for Academic Success and Advising (CASA)

The `Academic Success Center` is located in Maxcy 208 for help with your academic studies, or call 203-932-7234 to set up an appointment.

University Writing Center

The mission of the Writing Center (an expansion of the `Writer to Writer` peer-tutoring program) is to provide high-quality tutoring to undergraduate and graduate students as they write for a wide range of purposes and audiences. Tutors are undergraduate and graduate students and they work with students at any stage in the writing process; Bring in your assignment, your ideas, and any writing done so far. To make an appointment, register for an account at `https://newhaven.mywconline.com`.

The Math Zone

Please contact the `Math Zone` if you wish to challenge your Math Placement by taking a Math Challenge Exam or by taking a Math Post Placement Exam. These are discussed more extensively at `http://math.newhaven.edu/mathphysics/placement_html`. The Math Zone also provides a range of tutoring and classroom support service for students taking development math classes.

The Center for Learning Resources (CLR)

The `Center for Learning Resources` located in Peterson Library, provides academic content support to the students of the University of New Haven using metacognitive strategies that help students become aware of and learn to apply optimal learning processes in the pursuit of creating independent learners CLR tutors focus sessions on discussions of concepts and processes and typically use external examples to help students grasp and apply the material.

Accessibility Resources Center

Students with disabilities are encouraged to share, in confidence, information about needed specific course accommodations. The `Accessibility Resources Center` (ARC) provides comprehensive services and support that serve to promote educational equity and ensure that students are able to participate in the opportunities available at the University of New Haven. Accommodations cannot be made without written documentation from the ARC. The ARC is located on the ground floor in the rear of Sheffield Hall. Sheffield Hall is located in the Residential Quad area, and can be contacted at 203-932-7332. The ADA/Section 504 Compliance Officer is Rebecca Johnson, `RJohnson@newhaven.edu`, and can be reached by phone at 203-932-7238. Information on the ARC can be found at

Counseling and Psychological Services

The Counseling Center offers a variety of services aimed at helping students resolve personal difficulties and acquire the balance, skills, and knowledge that will enable them to take full advantage of their experience at the University of New Haven. Information about the, **Counseling and Psychological Services**, is available online.